or equivalent to those described herein can be used in the practice or testing of the invention, suitable methods and materials are described below. In case of conflict, the patent specification, including definitions, will control. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] The invention is herein described, by way of example only, with reference to the accompanying drawings. With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the embodiments of the invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice.

[0018] In the drawings.

[0019] FIG. **1** is a diagram of a bioreactor that can be used to prepare the cells.

[0020] FIG. **2** contains pictures of bone marrow (BM)-derived MSC (top row) or placental cells after adipogenesis assays. Cells were incubated with (left column) or without (right column) differentiation medium. Placental ASC were expanded in SRM (middle 3 rows depict 3 different batches) or in full DMEM (bottom row).

[0021] FIG. **3** contains pictures of BM-derived MSC (top row) or placental cells after osteogenesis assays. Cells were incubated with (left column) or without (right column) differentiation medium. Placental ASC were expanded in SRM (middle 3 rows depict 3 different batches) or in full DMEM (bottom row).

[0022] FIGS. **4**A-J are plots of luminescence of Luminex® beads, reflective of concentration (vertical axis), for IL-1-ra, Collagen IV-1a, Fibronectin, IL-13, HGF, VEGF-A, IL-4, PDGF-AA, TIMP-1, TGFb2, and TGFb1 (in A-J, respectively) in conditioned medium batches. P250416 R21 and P150518 R02 are maternal batches; R090418 R01 and R170216 R19 are fetal/serum batches; and PD060918 437B R01 and PD08016 441 BR09 (also labeled as "PD08016 441B BR09") are fetal SF batches. Bioreactor media from various batches (horizontal axis) were subjected to no treatment (BR, lanes 1-6 from left), Tangential Flow Filtration (TFF; Pall Corporation; lanes 7-12), or lyophilization (LYP; lanes 13-18) (upper panels). Lower panels depict analyses of CM generated in plates, with a higher cell/medium ratio.

[0023] FIG. **5** is a graph of secretion of IL-10 by PBMC in the absence or presence of ASC. Bars in each group, from left to right are: 1-3: Rat IL-10 after stimulation with 0, 1, or 10 mcg/ml LPS; and 4-6: human IL-10 after stimulation with 0, 1, or 10 mcg/ml LPS.

[0024] FIGS. **6**A-B are charts depicting lymphocyte proliferation, measured by [^{3}H]thymidine incorporation. Three replicates of each sample were performed. A. 2×10^5 peripheral blood (PB)-derived MNC (donor A) were stimulated with an equal number of irradiated (3000 Rad) PB-derived MNCs (donor B) in an MLR test, in the presence of different amounts of ASC. B. PB-derived MNCs stimulated with ConA (1.5 mg/ml).

[0025] FIGS. **7**A-C are charts depicting ASC regulation of pro- and anti-inflammatory cytokine secretion by human MNCs (isolated from peripheral blood). A-B depict secretion of IFN-gamma (A) and TNF-alpha (B) stimulation with ConA. C depicts secretion of IFN-gamma, TNF-alpha and IL-10 (left, middle, and right bars in each series, respectively) following stimulation with LPS. Supernatants were analyzed by ELISA

[0026] FIG. **8** is a graph of secretion profile of ASC under normoxic or hypoxic conditions.

[0027] FIGS. **9**A-B are graphs (each split into 2 panels) depicting secretion, measured by fluorescence, of various factors following incubation of ASC with TNF-alpha+IFN-gamma (gray bars) or control media (black bars) in two separate experiments. C-D are graphs depicting fold-increase of secretion, measured by fluorescence, of GRO, IL-8, MCP-1, and RANTES (C), and IL-6, MCP-3, Angiogenin, Insulin-like Growth Factor Binding Protein-2 (IGFBP-2), Osteopontin, and Osteoprotegerin (D) following incubation of ASC with TNF-alpha alone, relative to incubation with control media (no cytokines).

[0028] FIGS. **10**A-B are graphs depicting fold-increase relative to control medium (containing no cytokines) in secretion of MCP-1 (A) and GM-CSF (B) in several experiments, as measured by ELISA.

[0029] FIGS. **11**A-B are plots of average (A) or individual (B) CRP levels (vertical axis) vs. days from ASC administration (horizontal axis). In B, data from individual subjects are represented by different symbols and/or line patterns. Levels after the first and second (where applicable) administration are shown as black and gray lines, respectively.

[0030] FIGS. **12**A-B are plots of PEEP (Positive End Expiratory Pressure; A) and pH (B)(vertical axis) vs. days from ASC administration (horizontal axis).

[0031] FIGS. **13**A-B are chest radiographs of a patient showing improvement after (B) vs. before (A) ASC administration.

[0032] FIG. **14** is a plot of creatinine (vertical axis) vs. days from ASC administration (horizontal axis).

DETAILED DESCRIPTION

[0033] Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details set forth in the following description or exemplified by the Examples. The invention is capable of other embodiments or of being practiced or carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of description and should not be regarded as limiting.

[0034] Aspects of the invention relate to methods and compositions that comprise placental adherent stromal cells (ASC) and their conditioned media (CM). In some embodiments, the ASC may be human ASC, or in other embodiments animal ASC.

[0035] In one embodiment, there is provided a method for treating, or in another embodiment reducing an incidence of, or in another embodiment ameliorating, a viral infection, comprising administering a composition that comprises a cultured placental ASC, thereby treating, reducing an incidence of, or ameliorating a viral infection. In another